



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200
Fax 613 632-5246

Purchasing Receipts

PO No	Supplier	Line No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
P0042020	MCM001-VU	1		1 2% 10 Net 30	188-FSCS-1032-1-1/4	Screw				50	12/20/2018	50		S142223	Stock	1/7/2019	\$ 0.17 / Ea	0		\$8.57	McMaster-Carr Supply Co.
		2			2044T47	Tube Ø1.09				20		20		S142226	Stock	1/7/2019	\$ 0.61 / ft	0		\$12.10	McMaster-Carr Supply Co.
		3			30806	8 Wire				25		25		S142193	Stock	1/7/2019	\$ 3.02 / ft	0		\$75.50	McMaster-Carr Supply Co.
		4			3755T17	Lifting Oval Sleeve receive ea				10		10		S142196	Stock	1/7/2019	\$ 4.07 / Ea	0		\$40.65	McMaster-Carr Supply Co.
		5			5/16-18 SS THREADED	Threaded Rod receive f				6		6		S142230	Stock	1/7/2019	\$ 1.71 / ft	0		\$10.24	McMaster-Carr Supply Co.
		6			5274T761	Polypropylene Vial for Flange Wrench Bolts receive ea				10		10		S142197	Stock	1/7/2019	\$ 1.74 / Ea	0		\$17.44	McMaster-Carr Supply Co.
		7			5972K289	Bearing				4		4		S142224	Stock	1/7/2019	\$ 10.42 / Ea	0		\$41.68	McMaster-Carr Supply Co.
		8			601.2045	RTV (LOCTITE 598) : RTV, Loctite 598				16		16		S142190	Stock	1/7/2019	\$ 14.36 / Ea	0		\$229.76	McMaster-Carr Supply Co.
		9			6254K85	Chain receive pcs				50		50		S142162	Inactive	1/7/2019	\$ 14.98 / ft	0		\$749.00	McMaster-Carr Supply Co.
		10			6605K56	Hook And Loop Tie D3551-11				20		20		S142188	Inactive	1/7/2019	\$ 3.09 / pcs	0		\$61.80	McMaster-Carr Supply Co.
		11			7856K74	Heat Shrink Tubing, Ø19" ID Before, 25' Long receive pcs				25		25		S142191	Stock	1/7/2019	\$ 0.62 / Ea	0		\$15.56	McMaster-Carr Supply Co.

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
		12			8574K53	Clear Polycarbonate Sheet, 24" x 24" x 1/8"				2		2		S142232	Stock	1/7/2019	\$ 12.76 / sf	0		\$25.52	McMaster-Carr Supply Co.
		13			90145A439	Dowel Pin receive pcs				50		50		S142213	Stock	1/7/2019	\$ 0.15 / Ea	0		\$7.57	McMaster-Carr Supply Co.
		14			90145A443	Dowel Pin						50		S139527	Stock	12/20/2018	\$ 0.21 / Ea	18		\$10.62	McMaster-Carr Supply Co.
		15			90576A118	Cage Bumper Nut : same as C10-35						50		S142212	Stock	1/7/2019	\$ 0.18 / pcs	0		\$9.14	McMaster-Carr Supply Co.
		16			91268A967	Lifting Bolt				10		10		S142234	Stock	1/7/2019	\$ 46.13 / Ea	0		\$461.30	McMaster-Carr Supply Co.
		17			91257A758	Bolt Grade 8 Steel, 1/2"-20 Thread, 5-1/2" Long Partially Threaded				4		4		S142220	Stock	1/7/2019	\$ 3.00 / Ea	0		\$12.00	McMaster-Carr Supply Co.
		18			92185A564	Screw 1/4-28 Unf				10		10		S142218	Stock	1/7/2019	\$ 0.73 / Ea	0		\$7.30	McMaster-Carr Supply Co.
		19			92196A139	SCREW 6-32 x 1/8" SS				25		25		S142210	Stock	1/7/2019	\$ 0.33 / Ea	0		\$8.14	McMaster-Carr Supply Co.
		20			93475A280	Washer				51		51		S142207	Stock	1/7/2019	\$ 0.12 / Ea	0		\$6.22	McMaster-Carr Supply Co.
		21			94748A429	SS Knob-Grip Push-Button Quick Release Pin 3/8" Dia. x 2-1/2" Long				5		5		S142199	Stock	1/7/2019	\$ 39.70 / Ea	0		\$198.50	McMaster-Carr Supply Co.
		22			MT-O1-B-0.375X0.500	Tool Steel Bar 0.375" X 0.500"				6		6		S142236	Stock	1/7/2019	\$ 13.23 / ft	0		\$79.38	McMaster-Carr Supply Co.
		23			97395A451	Dowel Pin receive ea				40		40		S142204	Stock	1/7/2019	\$ 0.85 / Ea	0		\$34.12	McMaster-Carr Supply Co.
		24			97395A491					10		10		S142219	Stock	1/7/2019	\$ 1.38 / Ea	0		\$13.79	McMaster-Carr

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
						SS Dowel Pin 1/4" Dia. x 1" Lg.															Supply Co.
		25			97526A421	Rivet receive ea				100		100		S142208	Stock	1/7/2019	\$ 0.19 / Ea	0		\$18.72	McMaster-Carr Supply Co.
		26			97633A475	External Retaining Ring for 2-7/8" OD				5		5		S139532	Stock	12/20/2018	\$ 1.85 / Ea	18		\$9.24	McMaster-Carr Supply Co.
		27			9776K33	Hook And Loop Strip 1" D3800-3-100				75		75		S142173	Inactive	1/7/2019	\$ 1.21 / ft	0		\$90.59	McMaster-Carr Supply Co.
		28			98381A544	Dowel Pin, Large Ø 1/4 X 1-1/4				25		25		S139511	Stock	12/20/2018	\$ 0.28 / Ea	18		\$7.09	McMaster-Carr Supply Co.
		29			98381A657	Dowel Pin				10		10		S142206	Stock	1/7/2019	\$ 1.82 / Ea	0		\$18.16	McMaster-Carr Supply Co.
		30			98758A516	Steel Thread Rod 1/2"-13 x 3-1/2" Long receive ea				6		6		S142200	Stock	1/7/2019	\$ 2.33 / Ea	0		\$13.98	McMaster-Carr Supply Co.
		31			MC1095S 020	C1095 Blue Tempered Spring Steel Sheet 020 : MCMaster P/N: 9036K499 X 1 PK MIL-B-5687D BLUE FINISHED AND POLISHED 1095 SPRING STEEL 020 6" X 20' COIL receive sf				10		10		S142237	Stock	1/7/2019	\$ 7.61 / sf	0		\$76.08	McMaster-Carr Supply Co.
		32			MDLRLNR0.375	M Delrin Round Bar, Black				5		5		S142238	Stock	1/7/2019	\$ 0.74 / ft	0		\$3.70	McMaster-Carr Supply Co.
		33			MT-O1-B-0.500X12.000	AISI O1 TOOL STEEL BAR 0.500" High X 12.000" Wide				3		3		S142239	Stock	1/7/2019	\$ 145.66 / ft	0		\$436.97	McMaster-Carr Supply Co.
		34			MT-O1-R0.375	Tool Steel Round Bar 0.375 dia.				6		6		S142240	Stock	1/7/2019	\$ 2.59 / ft	0		\$15.56	McMaster-Carr



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO042020**

Supplier: MCM001-VU
McMaster-Carr Supply Co,
P.O. Box 7690
Chicago, IL 60680-7690 USA
Phone: 330 995 5500
Fax: 330 995 9600

PO No: PO042020

PO Date: 12/17/18

Due Date: 12/20/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

E-MAILED
DEC 17 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pynt Terms: 2% 10 Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1		188-FSCS-1032-1-1/4	92196A276	Screw	Firmed	-	12/20/18	50 Ea	0 Ea	50 Ea	\$0.1714/Ea	\$8.57
2		2044T47	4 ft long	Tube Ø1.09	Firmed	-	12/20/18	20 ft	0 ft	20 ft	\$0.605/ft	\$12.10
Line Item Note 5 pcs of 4 ft												
3		30806	7081K38	8 Wire	Firmed	-	12/20/18	25 ft	0 ft	25 ft	\$3.02/ft	\$75.50
4		3755T17	2/pk	Lifting Oval Sleeve receive ea	Firmed	-	12/20/18	10 Ea	0 Ea	10 Ea	\$4.065/Ea	\$40.65
5		5/16-18 SS THREADED	98847A030	Threaded Rod	Firmed	-	12/20/18	6 ft	0 ft	6 ft	\$1.706666/ft	\$10.24
6		5274T761	5/pk	Polypropylene Vial for Flange Wrench Bolts receive ea	Firmed	-	12/20/18	10 Ea	0 Ea	10 Ea	\$1.744/Ea	\$17.44
7		5972K289		Bearing	Firmed	-	12/20/18	4 Ea	0 Ea	4 Ea	\$10.42/Ea	\$41.68
8		601.2045	6641A41	RTV (LOCTITE 598) : RTV, Loctite 598	Firmed	-	12/20/18	16 Ea	0 Ea	16 Ea	\$14.36/Ea	\$229.76
9	187765	6264k85		Chain	Firmed	-	12/20/18	50 ft	0 ft	50 ft	\$14.98/ft	\$749.00
Line Item Note AS PER DWG D5039 REV. B												
10	187766	6605K56	5/pk	Hook And Loop Tie D3551-11	Firmed	-	12/20/18	20 pcs	0 pcs	20 pcs	\$3.09/pcs	\$61.80
Line Item Note AS PER DWG D3551 REV.A												



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PURCHASE ORDER PO042020

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
11		7856K74	25 ft	Heat Shrink Tubing, Ø19" ID Before, 25' Long receive pcs	Firmed -	-	12/20/18	25 Ea	0 Ea	25 Ea	\$0.6224/Ea	\$15.56
12		8574K53	2 sf per pcs	Clear Polycarbonate Sheet, 24" x 24" x 1/8"	Firmed -	-	12/20/18	2 sf	0 sf	2 sf	\$12.76/sf	\$25.52
13		90145A439	50/pk	Dowel Pin receive pcs	Firmed -	-	12/20/18	50 Ea	0 Ea	50 Ea	\$0.1514/Ea	\$7.57
14		90145A443	50/pk	Dowel Pin	Firmed -	-	12/20/18	50 Ea	0 Ea	50 Ea	\$0.2124/Ea	\$10.62
15		90576A118	50/pk	Cage Bumper Nut : same as C10-35	Firmed -	-	12/20/18	50 pcs	0 pcs	50 pcs	\$0.1828/pcs	\$9.14
16		91268A967	1/pk	Lifting Bolt	Firmed -	-	12/20/18	10 Ea	0 Ea	10 Ea	\$46.13/Ea	\$461.30
17		91257A758	1/pack	Bolt Grade 8 Steel, 1/2"-20 Thread, 5-1/2" Long Partially Threaded	Firmed -	-	12/20/18	4 Ea	0 Ea	4 Ea	\$3.00/Ea	\$12.00
18		92185A564	10/pk	Screw 1/4-28 Unf	Firmed -	-	12/20/18	10 Ea	0 Ea	10 Ea	\$0.73/Ea	\$7.30
19		92196A139	25/pk	SCREW 6-32 x 1/8" SS	Firmed -	-	12/20/18	25 Ea	0 Ea	25 Ea	\$0.3256/Ea	\$8.14
20		93475A280	50/pk	Washer	Firmed -	-	12/20/18	50 Ea	0 Ea	50 Ea	\$0.122/Ea	\$6.10
21		94748A429	1/pk	SS Knob-Grip Push-Button Quick Release Pin 3/8" Dia. x 2-1/2" Long	Firmed -	-	12/20/18	5 Ea	0 Ea	5 Ea	\$39.70/Ea	\$198.50
22		MT-O1-B-0.375X0.500	9516K101 6 ft	Tool Steel Bar 0.375" X 0.500"	Firmed -	-	12/20/18	6 ft	0 ft	6 ft	\$13.22666/ft	\$79.36
23		97395A451	10/pk	Dowel Pin receive ea	Firmed -	-	12/20/18	40 Ea	0 Ea	40 Ea	\$0.853/Ea	\$34.12
24		97395A491	10/pk	SS Dowel Pin 1/4" Dia. x 1" Lg.	Firmed -	-	12/20/18	10 Ea	0 Ea	10 Ea	\$1.379/Ea	\$13.79
25		97526A421	97526A160 100/pk	Rivet receive ea	Firmed -	-	12/20/18	100 Ea	0 Ea	100 Ea	\$0.1872/Ea	\$18.72



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PURCHASE ORDER **PO042020**

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
26		97633A475	5/pk	External Retaining Ring for 2-7/8" OD.	Firmed	-	12/20/18	5 Ea	0 Ea	5 Ea	\$1.848/Ea	\$9.24
27	187769	9776K33	75 ft roll	Hook And Loop Strip 1" D3800-3-100	Firmed	-	12/20/18	75 ft	0 ft	75 ft	\$1.2078666/ft	\$90.59
Line Item Note AS PER DWG D3800 REV. B												
28		98381A544	25/pk	Dowel Pin, Large Ø 1/4 X 1-1/4	Firmed	-	12/20/18	25 Ea	0 Ea	25 Ea	\$0.2836/Ea	\$7.09
29		98381A667	5/pk	Dowel Pin	Firmed	-	12/20/18	10 Ea	0 Ea	10 Ea	\$1.816/Ea	\$18.16
30		98758A516	1/pk	Steel Thread Rod 1/2"-13 x 3-1/2" Long receive ea	Firmed	-	12/20/18	6 Ea	0 Ea	6 Ea	\$2.33/Ea	\$13.98
31		MC1095S.020	9036K499	C1095 Blue Tempered Spring Steel Sheet .020 : MCMASER P/N: 9036K499 X 1 PK MIL-B-5687D BLUE FINISHED AND POLISHED 1095 SPRING STEEL .020 6" X 20' COIL receive sf	Firmed	-	12/20/18	10 sf	0 sf	10 sf	\$7.6075/sf	\$76.08
Line Item Note 1 P[CS OF 6" X 20 FT = 10 SF												
32		MDELINR0.375	8576K13 5 ft	M Delrin Round Bar, Black	Firmed	-	12/20/18	5 ft	0 ft	5 ft	\$0.74/ft	\$3.70
33		MT-O1-B-0.500X12.000	9516K527. 3 FT	AISI.01 TOOL STEEL BAR 0.500" High X 12.000" Wide	Firmed	-	12/20/18	3 ft	0 ft	3 ft	\$145.65666/ft	\$436.97
34		MT-O1-R0.375	8893K239 6 ft	Tool Steel Round Bar 0.375 dia.	Firmed	-	12/20/18	6 ft	0 ft	6 ft	\$2.593333/ft	\$15.56
35		MT-O1-R0.625	8893K9 6 FT	Tool Steel Round Bar 0.625 dia.	Firmed	-	12/20/18	6 ft	0 ft	6 ft	\$5.1366666/ft	\$30.82
Grand Total:											\$2,856.66	



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Hawkesbury, ON
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PURCHASE ORDER PO042020

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY
A016 PERSONNEL QUALIFICATION
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A032 DOCUMENT SPECIAL REQUIREMENTS
A033 STATEMENT OF CONFORMITY/TEST RECORDS FOR NAS, AN and MS FASTENERS
A040 NOTIFICATION OF QUALITY ESCAPE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENTS

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

CL

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 12/17/18 8:53 AM dart.lavoie.chantal

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO042020

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Order Placed By
Chantal Lavoie

12/17/2018

McMaster-Carr Number
5473390-02

Line	Product	Ordered	Shipped
1	92196A276 18-8 Stainless Steel Socket Head Screw, 10-32 Thread Size, 1-1/4" Long, Partially Threaded, Packs of 50	1 Pack	1 ✓
2	2044T47 Round Cut-to-Length Shipping Tube, 1.09" ID, 48" Inside Length	5 Each	5 ✓
3	7081K38 Cable, SOOW, Black Outer Insulation, 16 Gauge, 8 Wires, 25' Long	25 Feet	25 ✓
4	3755T17 Wire Rope Compression Sleeve - for Lifting for Stainless Steel and Steel Rope, 18-8 Stainless Steel, for 3/16" Rope Diameter, Packs of 2	5 Packs	5 ✓
5	98847A030 18-8 Stainless Steel Threaded Rod, 5/16"-18 Thread Size, 3 Feet Long, Packs of 1	2 Packs	2 ✓
6	5274T761 Polypropylene Plastic Vials with Tight Fitting Lid, 1.9 oz./55 ml Capacity, Packs of 5	2 Packs	2 ✓
7	5972K289 Ball Bearing, Sealed, Trade No. 6903-2RS, for 17 mm Shaft Diameter	4 Each	4 ✓
8	6641A41 Flexible Gasket Maker Sealant, Loctite 598, 2.36 oz. Tube	16 Each	16 ✓
9	6264K85 Single Strand Corrosion-Resistant Roller Chain, ANSI Number 40-SS, 1/2" Pitch, 50 Feet Long	1 Each	1 ✓
10	6605K56 Hook and Loop Cable Ties, 24" Overall Length, Meets UL 94V2, Packs of 5	4 Packs	4 ✓
11	7856K74 Heat-Shrink Tubing, 25 Feet Long, 0.19" ID Before Shrinking, Black	1 Each	1 ✓
12	8574K53 Clear Polycarbonate Sheet, 24" x 24" x 1/8"	1 Each	1 ✓
13	90145A439 18-8 Stainless Steel Dowel Pin, 3/32" Diameter, 9/16" Long, Packs of 50	1 Pack	1 3 extra
14	90145A443 18-8 Stainless Steel Dowel Pin, 3/32" Diameter, 1" Long, Packs of 50	1 Pack	1 ✓
15	90576A118 Medium-Strength Steel Nylon-Insert Locknut, Class 8, Zinc-Plated, M10 x 1.5 mm Thread, Packs of 50	1 Pack	1 ✓
16	91268A967 High-Strength Grade 8 Steel Hex Head Screw, 1-1/2"-6 Thread Size, 12" Long, Packs of 1	10 Packs	10 ✓
17	91257A758 Zinc Yellow-Chromate Plated Hex Head Screw, Grade 8 Steel, 1/2"-20 Thread, 5-1/2" Long, Partially Threaded, Packs of 1	4 Packs	4 ✓
18	92185A564 Super-Corrosion-Resistant 316 Stainless Steel Socket Head Screw, 1/4"-28 Thread Size, 1" Long, Packs of 10	1 Pack	1 ✓
19	92196A139 18-8 Stainless Steel Socket Head Screw, 6-32 Thread Size, 1/8" Long, Packs of 25	1 Pack	1 ✓

Packing List

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO042020
Order Placed By
Chantal Lavoie

Page 2 of 2

12/17/2018

McMaster-Carr Number
5473390-02

Line	Product	Ordered	Shipped
20	93475A280 18-8 Stainless Steel Washer for M10 Screw Size, 10.5 mm ID, 20 mm OD, Packs of 50	51 1 Pack	1 ✓ <i>extra</i>
21	94748A429 Knob-Grip Push-Button Quick-Release Pin with Lanyard, 3/8" Diameter, 2-1/2" Usable Length	5 Each	5 ✓
22	9516K101 Tight-Tolerance Multipurpose O1 Tool Steel Bar, 3/8" Thick, 1/2" Wide, 6 Feet Long	1 Each	1 ✓
23	97395A451 Dowel Pin, 316 Stainless Steel, 1/8" Diameter, 3/4" Long, Packs of 10	4 Packs	4 ✓
24	97395A491 Dowel Pin, 316 Stainless Steel, 1/4" Diameter, 1" Long, Packs of 10	1 Pack	1 ✓
25	97526A421 Domed Head Blind Rivets, 3/16" Diameter, for 0.3760"-0.5" Material Thickness, Black, Packs of 100	1 Pack	1 ✓ <i>miss</i>
26	97633A475 External Retaining Ring for 2-7/8" OD, Black-Phosphate 1060-1090 Spring Steel, Packs of 5	1 Pack	1 ✓
27	9776K33 Flame-Retardant Hook, 1" Wide x 75 Feet Long	1 Each	1 ✓
29	98381A667 Dowel Pin, Alloy Steel, 7/16" Diameter, 3/4" Long, Packs of 5	2 Packs	2 ✓
30	98758A516 Medium-Strength Threaded Rod, Grade B7 Black-Oxide Steel, 1/2"-13 Thread Size, 3-1/2" Long	6 Each	6 ✓
31	9036K499 Wear-Resistant 1095 Spring Steel, 0.0200" Thick, 6" Wide, 20 Feet Long	1 Each	1 ✓
32	8576K13 Black Delrin® Acetal Resin Rod, 3/8" Diameter, 5 Feet Long	5 Feet	5 ✓
33	9516K527 Tight-Tolerance Multipurpose O1 Tool Steel Bar, 1/2" Thick, 12" Wide, 3 Feet Long	1 Each	1 ✓
34	8893K239 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 0.3750" Diameter, 6 Feet Long	1 Each	1 ✓
35	8893K9 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 0.6250" Diameter, 6 Feet Long	1 Each	1 ✓

Shipped separately from our Chicago warehouse on 12/17

28	98381A544 Dowel Pin, Alloy Steel, 1/4" Diameter, 1-1/4" Long	1 Pack	1
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Tight-Tolerance Multipurpose O1 Tool Steel Bar 3/8" Thick, 1/2" Wide

9516K101



Tight-Tolerance Multipurpose O1 Tool Steel Bar, 3/8" Thick, 1/2" Wide | McMaster-Carr

Material	O1 Tool Steel
Cross Section Shape	Rectangle
Construction	Solid
Appearance	Plain
Thickness	3/8"
Thickness Tolerance	-0.001" to 0.001"
Tolerance Rating	Tight
Width	1/2"
Width Tolerance	0" to 0.005"
Yield Strength	50,000 psi
Temper Rating	Not Rated
Hardness	Rockwell B85
Hardness Rating	Medium
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C65
Mechanical Finish	Precision Ground
Temperature Range	Not Rated
Specifications Met	ASTM A681
Flatness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Coefficient of Thermal Expansion	7.1×10^{-6}
Elongation	25%
Material Composition	
Iron	94.79-96.95%
Carbon	0.85-1.05%
Chromium	0.40-0.70%

Manganese	1.00-1.40%
Nitrogen	0.40-0.60%
Phosphorus	0-0.030%
Silicon	0-0.50%
Sulfur	0-0.030%
Tungsten	0.40-0.60%
Vanadium	0-0.30%
Length	1 1/2 ft., 3 ft., 6 ft.
Additional Specifications	Guidelines for Heat Treating Tool Steel

These precision-ground sheets and bars have a tight thickness tolerance of $\pm 0.001"$ (± 0.05 mm). Commonly used for dies, punches, and gauges, O1 tool steel is an oil-hardening material that resists wear and abrasion. Sheets and bars are also known as flat stock.

8	7	6	5	4	3	2	1
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SPECIFICATION:
DIN 1.2510 or B.S. BO 1 or
SAE J437 or SAE J438
or UNS T31501 or ASTM A681

PART NUMBER:
MT-O1-B-[H.HHH]x[W.WWWW]
WHERE "H.HHH" = HEIGHT IN INCHES
WHERE "W.WWWW" = WIDTH IN INCHES
EG. 4"x6" BAR = MT-O1-B-4.000x6.000

TOLERANCES PER MANUFACTURER SPECIFICATIONS

[illegible]

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-01-B-0.375x0.500

PO / BATCH NO.: P0042020/S142236

DATE: 11/01/07

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 64
 QUANTITY INSPECTED: 64
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.375"
 THICKNESS RECEIVED: 0.375"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	N	
CORROSION	Y	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	N	<u>ASTM A681</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	N	<u>P0042020</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____
DATE: <u>11/01/07</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Black Delrin® Acetal Resin Rod
3/8" Diameter, 5 Feet Long

\$0.74 per ft. of 5
8576K13



Material	Delrin® Acetal Plastic
Cross Section Shape	Round
Construction	Solid
Texture	Smooth
Color	Black
Clarity	Opaque
Diameter	3/8"
Diameter Tolerance	0" to +0.005"
Tolerance Rating	Oversized
Length	5 ft.
Hardness	Rockwell M90
Hardness Rating	Hard
For Use Outdoors	No
Temperature Range	-20° to 180° F
Impact Strength	1.00 ft.-lbs./in.
Impact Strength Rating	Good
Tensile Strength	9,000 psi
Tensile Strength Rating	Good
Specifications Met	ASTM D6100
Density	0.051 lbs./cu. in.
Coefficient of Friction	0.20
Dielectric Strength	435 V/mil
Water Absorption	0.30%
Coefficient of Thermal Expansion	5 - 10 ⁻⁵ in./in./°F
RoHS	Compliant

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL DELRIN II 150E OR ACETRON GP ACETAL

PART NUMBER: M-DELRIN-R D.DDD X COLOR CODE

WHERE D.DDD = DIAMETER IN INCHES
X = COLOR CODE, "W" = WHITE, OMITTED = BLACK
EG. 1" BLACK ROUND BAR = M-DELRIN-R1.000
2" WHITE ROUND BAR = M-DELRIN-R2.000W

2010 MAR 27 4
REV 13-657

REV	DESCRIPTION	BY	DATE
B	UPDATE DRAWING TO CURRENT STANDARDS ADD MATERIAL COLOR "WHITE" ADD REASON FOR "ACETRON GP ACETAL" AS OPTION (REV. A1)	SAD	17.10.19
A	NEW ISSUE	DS	01.11.12
DESIGN	SAD		
DRAWN	SAD		
CHECKED	RF		
MFG. APPR.	RA		
APPROVED	HS		
DE APPR.	CP 47		
DATE	17.10.19		

DART AEROSPACE LTD
HAYRESBURY, ONTARIO, CANADA

REV. B
SHEET 1 OF 1
SCALE
NTS

DELIN ROUND BAR

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APPROVED

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MODEL IN R 0.375
 DATE: 19/01/07

PO / BATCH NO.: P0042020 / 5142238

MATERIAL CERT REC'D: ✓
 QUANTITY RECEIVED: 5L
 QUANTITY INSPECTED: 5L
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.375
 THICKNESS RECEIVED: 0.375
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	Y	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL PER M-DRAWING	Y	N	<i>Delim</i>
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	Y	N	<i>P0042020</i>
CORRECT MATERIAL IDENTIFICATION	Y	N	
CORRECT M# ON THE MATERIAL	Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> DATE: <u>19/01/07</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

McMASTER-CARR

Tight-Tolerance Multipurpose O1 Tool Steel Bar 1/2" Thick, 12" Wide

9516K527



Material	O1 Tool Steel
Cross Section Shape	Rectangle
Construction	Solid
Appearance	Plain
Thickness	1/2"
Thickness Tolerance	-0.001" to 0.001"
Tolerance Rating	Tight
Width	12"
Width Tolerance	0" to 0.015"
Yield Strength	50,000 psi
Temper Rating	Not Rated
Hardness	Rockwell B85
Hardness Rating	Medium
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C65
Mechanical Finish	Precision Ground
Temperature Range	Not Rated
Specifications Met	ASTM A681
Flatness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Coefficient of Thermal Expansion	7.1×10^{-6}
Elongation	25%
Material Composition	
Iron	94.79-96.95%
Carbon	0.85-1.05%
Chromium	0.40-0.70%


Manganese	1.00-1.40%
Nitrogen	0.40-0.60%
Phosphorus	0-0.030%
Silicon	0-0.50%
Sulfur	0-0.030%
Tungsten	0.40-0.60%
Vanadium	0-0.30%
Length	1 1/2 ft., 3 ft., 6 ft.
Additional Specifications	Guidelines for Heat Treating Tool Steel

These precision-ground sheets and bars have a tight thickness tolerance of $\pm 0.001"$ (± 0.05 mm). Commonly used for dies, punches, and gauges, O1 tool steel is an oil-hardening material that resists wear and abrasion. Sheets and bars are also known as flat stock.

REV	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	VM	VM

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI O1 TOOL STEEL BAR
SPECIFICATION: DIN 1.2510 or B.S. BO 1 or
SAE J437 or SAE J438
or UNS T31501 or ASTM A681
PART NUMBER: MT-O1-B-[H.HHH]x[W.WWWW]
WHERE "H.HHH" = HEIGHT IN INCHES
WHERE "W.WWWW" = WIDTH IN INCHES
EG. 4"x6" BAR = MT-O1-B-4.000x6.000
TOLERANCES PER MANUFACTURER SPECIFICATIONS

 DART AEROSPACE	
AISI O1 TOOL STEEL BAR	
DESIGNED BY: VM 09/2017 CHECKED BY: SAC 09/03/2017 DATE APPE: VM 09/07/2017 CA APPE: DP 09/07/2017 APPROVED BY: VM 09/12/2017 DATE: 9/7/2017	MT-O1-B XXX 2 005 FRACTIONS 1/16 XX 1 01 ANGLES 1/8" DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED FINISH: 160 VOL PER 1. DIMENSIONAL LIMITS APPLY 2. WEIGHT N/A LBS 3. SCALE N/A
COPYRIGHT © 2017 BY DART AEROSPACE LTD ALL RIGHTS RESERVED	

UNIT - LBS

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-01-B-0.50x12.00

PO / BATCH NO.: P0042020/5/42239

DATE: 19/01/07

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.500"

QUANTITY RECEIVED: 3ft

THICKNESS RECEIVED: 0.500"

QUANTITY INSPECTED: 3ft

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
CORROSION	Y <input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	<u>ASTM A681</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	<u>P0042020</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
<div style="display: flex; justify-content: space-between;"> <div> INSPECTED BY: <u>DAS 61</u> <small>089</small> DATE: <u>19/01/07</u> </div> <div> SIGNED OFF BY: _____ DATE: _____ </div> </div>	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Tight-Tolerance Multipurpose O1 Tool Steel Rod
0.3750" Diameter



Material	O1 Tool Steel
Cross Section Shape	Round
Construction	Solid
Appearance	Plain
Diameter	0.375"
Diameter Tolerance	-0.0005" to 0.0005"
Tolerance Rating	Tight
Yield Strength	50,000 psi
Temper Rating	Softened (Annealed)
Hardness	Rockwell B90
Hardness Rating	Medium
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C65
Mechanical Finish	Precision Ground
Temperature Range	Not Rated
Specifications Met	ASTM A681
Straightness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Coefficient of Thermal Expansion	7.1×10^{-6}
Elongation	25%
Material Composition	
Iron	94.79-96.95%
Carbon	0.85-1.05%
Chromium	0.40-0.60%
Manganese	1.00-1.40%
Nitrogen	0.40-0.60%

Phosphorus	0-0.030%
Silicon	0-0.50%
Sulfur	0-0.030%
Tungsten	0.40-0.60%
Vanadium	0-0.30%
Length	3 ft., 6 ft.
Additional Specifications	Guidelines for Heat Treating Tool Steel
RoHS	Compliant

These precision-ground rods have a tight diameter tolerance. Commonly used for dies, punches, and gauges, O1 tool steel is an oil-hardening material that resists wear and abrasion.

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

REV.	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	VM	VM

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 01 TOOL STEEL ROUND BAR
SPECIFICATION: DIN 1.2510 or B.S. BO 1 or
SAE J437 or SAE J438
or UNS T31501 or ASTM A881
PART NUMBER: MT-01-R [D.DDD]
WHERE "D.DDD" = DIAMETER IN INCHES
EG. 5/8" ROUND BAR = MT-01-R0.625

DART AEROSPACE		AISI 01 TOOL STEEL ROUND BAR	
DESIGN BY:	VM 8/9/2017	DATE:	17.08.09
DRAWN BY:	VM 03/11/2017	BY:	VM
CHECKED:	SAC 03/11/2017	APPROVED:	VM
MO. APPR:	FP 09/12/2017	1 DIMENSIONS ARE IN INCHES 2 SURFACES = 125 3 DIMENSIONS ARE IN MILLIMETERS 4 SURFACES = 125 5 DIMENSIONS ARE IN INCHES 6 SURFACES = 125 7 DIMENSIONS ARE IN MILLIMETERS 8 SURFACES = 125 9 DIMENSIONS ARE IN INCHES 10 SURFACES = 125 11 DIMENSIONS ARE IN MILLIMETERS 12 SURFACES = 125 13 DIMENSIONS ARE IN INCHES 14 SURFACES = 125 15 DIMENSIONS ARE IN MILLIMETERS 16 SURFACES = 125 17 DIMENSIONS ARE IN INCHES 18 SURFACES = 125 19 DIMENSIONS ARE IN MILLIMETERS 20 SURFACES = 125 21 DIMENSIONS ARE IN INCHES 22 SURFACES = 125 23 DIMENSIONS ARE IN MILLIMETERS 24 SURFACES = 125 25 DIMENSIONS ARE IN INCHES 26 SURFACES = 125 27 DIMENSIONS ARE IN MILLIMETERS 28 SURFACES = 125 29 DIMENSIONS ARE IN INCHES 30 SURFACES = 125 31 DIMENSIONS ARE IN MILLIMETERS 32 SURFACES = 125 33 DIMENSIONS ARE IN INCHES 34 SURFACES = 125 35 DIMENSIONS ARE IN MILLIMETERS 36 SURFACES = 125 37 DIMENSIONS ARE IN INCHES 38 SURFACES = 125 39 DIMENSIONS ARE IN MILLIMETERS 40 SURFACES = 125 41 DIMENSIONS ARE IN INCHES 42 SURFACES = 125 43 DIMENSIONS ARE IN MILLIMETERS 44 SURFACES = 125 45 DIMENSIONS ARE IN INCHES 46 SURFACES = 125 47 DIMENSIONS ARE IN MILLIMETERS 48 SURFACES = 125 49 DIMENSIONS ARE IN INCHES 50 SURFACES = 125 51 DIMENSIONS ARE IN MILLIMETERS 52 SURFACES = 125 53 DIMENSIONS ARE IN INCHES 54 SURFACES = 125 55 DIMENSIONS ARE IN MILLIMETERS 56 SURFACES = 125 57 DIMENSIONS ARE IN INCHES 58 SURFACES = 125 59 DIMENSIONS ARE IN MILLIMETERS 60 SURFACES = 125 61 DIMENSIONS ARE IN INCHES 62 SURFACES = 125 63 DIMENSIONS ARE IN MILLIMETERS 64 SURFACES = 125 65 DIMENSIONS ARE IN INCHES 66 SURFACES = 125 67 DIMENSIONS ARE IN MILLIMETERS 68 SURFACES = 125 69 DIMENSIONS ARE IN INCHES 70 SURFACES = 125 71 DIMENSIONS ARE IN MILLIMETERS 72 SURFACES = 125 73 DIMENSIONS ARE IN INCHES 74 SURFACES = 125 75 DIMENSIONS ARE IN MILLIMETERS 76 SURFACES = 125 77 DIMENSIONS ARE IN INCHES 78 SURFACES = 125 79 DIMENSIONS ARE IN MILLIMETERS 80 SURFACES = 125 81 DIMENSIONS ARE IN INCHES 82 SURFACES = 125 83 DIMENSIONS ARE IN MILLIMETERS 84 SURFACES = 125 85 DIMENSIONS ARE IN INCHES 86 SURFACES = 125 87 DIMENSIONS ARE IN MILLIMETERS 88 SURFACES = 125 89 DIMENSIONS ARE IN INCHES 90 SURFACES = 125 91 DIMENSIONS ARE IN MILLIMETERS 92 SURFACES = 125 93 DIMENSIONS ARE IN INCHES 94 SURFACES = 125 95 DIMENSIONS ARE IN MILLIMETERS 96 SURFACES = 125 97 DIMENSIONS ARE IN INCHES 98 SURFACES = 125 99 DIMENSIONS ARE IN MILLIMETERS 100 SURFACES = 125	

0-17-140

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-01-R0.375

PO / BATCH NO.: P0042020/S142240

DATE: 19/01/07

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.375"

QUANTITY RECEIVED: 684

THICKNESS RECEIVED: 0.375"

QUANTITY INSPECTED: 614

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
CORROSION	Y <input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	<u>ASTM A681</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	<u>P0042020</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS</u> 61 9-89	SIGNED OFF BY: _____		
DATE: <u>19/01/07</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Tight-Tolerance Multipurpose O1 Tool Steel Rod
0.6250" Diameter

8893K9



Material	O1 Tool Steel
Cross Section Shape	Round
Construction	Solid
Appearance	Plain
Diameter	0.625"
Diameter Tolerance	-0.001" to 0.001"
Tolerance Rating	Tight
Yield Strength	50,000 psi
Temper Rating	Softened (Annealed)
Hardness	Rockwell B90
Hardness Rating	Medium
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C65
Mechanical Finish	Precision Ground
Temperature Range	Not Rated
Specifications Met	ASTM A681
Straightness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Coefficient of Thermal Expansion	7.1×10^{-6}
Elongation	25%
Material Composition	
Iron	94.79-96.95%
Carbon	0.85-1.05%
Chromium	0.40-0.70%
Manganese	1.00-1.40%
Nitrogen	0.40-0.60%

Phosphorus	0-0.030%
Silicon	0-0.50%
Sulfur	0-0.030%
Tungsten	0.40-0.60%
Vanadium	0-0.30%
Length	1 ft., 3 ft., 6 ft.
Additional Specifications	Guidelines for Heat Treating Tool Steel
RoHS	Compliant

These precision-ground rods have a tight diameter tolerance. Commonly used for dies, punches, and gauges, O1 tool steel is an oil-hardening material that resists wear and abrasion.

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI O1 TOOL STEEL ROUND BAR
SPECIFICATION: DIN 1.2510 or B.S. BO 1 or
SAE J437 or SAE J438
or UNS T31501 or ASTM A881
PART NUMBER: MT-O1-R [D.DDD]
WHERE "D.DDD" = DIAMETER IN INCHES
EG. 5/8" ROUND BAR = MT-O1-R0.625

REV.	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	VM	VM

DART AEROSPACE		DESIGN BY: VM 08/02/2017		DATE: 17.08.09	BY: VM	APPROVED: VM
AISI O1 TOOL STEEL ROUND BAR		CHECKED: SAC 08/31/2017				
DRAFT NO.		DATE: 08/31/2017				
DRAWN BY: VM 08/31/2017		DATE: 08/31/2017				
CHECKED: SAC 08/31/2017		DATE: 08/31/2017				
MFG. APPR: PD 09/05/2017		DATE: 09/05/2017				
QA APPR: VM 09/12/2017		DATE: 09/12/2017				
APPROVED: VM 09/12/2017		DATE: 09/12/2017				
DATE: 08/31/2017		SCALE: NTS		SHEET 1 OF 1		
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UN17-00

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-01-R0-625

PO / BATCH NO.: P0042020/5142241

DATE: 19/01/07

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.625"

QUANTITY RECEIVED: 654

THICKNESS RECEIVED: 0.625"

QUANTITY INSPECTED: 654

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) (N)	<u>ASTM A681</u>
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	<u>P0042020</u>
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>BAS</u> <u>61</u> <u>9-88</u>	SIGNED OFF BY: _____		
DATE: <u>19/01/07</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in